

Micah Gravitt

From: Micah Gravitt
Sent: Friday, November 14, 2014 3:05 PM
To: 'Bobby Nolen'
Cc: Jennifer Innes
Subject: RE: Tracy City - Project No. 14, Section 2: Status of Review
Attachments: 0842_001.pdf

Mr. Nolen (Sorry about the name thing, I got in a hurry),

The statement at the top of page 8 basically states that since there is a loss of buffer, it needs to be replaced when possible. What that means is the replacement needs to be enhanced. This can be achieved with plantings of native trees along the riparian zone where possible. Otherwise your justification is fine. We will accept the waste site documentation. However for future projects, we usually like to see it included in the drawings. See the attachment for the details. Sometimes our new manual doesn't have good references so I attached the applicable controls from the old one. I just assumed you had something for them. The only differences between your silt fence detail and the type C is the use of steel post instead of wood and the spacing is 4' apart not 6'. Also, I have attached the proper seed charts for you to include in the plan. Let me know if you have any other questions. To answer your other two emails:

1. No they do not need to sign again.
2. That will be fine.

Micah Gravitt
Environmental Program Coordinator
Chattanooga Field Office
(423) 634-2547

From: Bobby Nolen [<mailto:reepicheep@charter.net>]
Sent: Friday, November 14, 2014 2:15 PM
To: Micah Gravitt
Subject: RE: Tracy City - Project No. 14, Section 2: Status of Review

Mr. Gravitt:

Thanks for your quick response. Please clarify or comment on the following:

- I could not read your note at the top of page 8. Please provide that text.
- The waste excavation site is referenced on the aerial photo provided as part of the SWPPP (last page of the file). The location of the WTP is shown relative to the site location. Please let me know if this is sufficient.
- Please provide the reference for the correct type of silt fence. I find only one detail in the EandS Manual (page 250).
- Please provide the EandS Manual reference for the matting that you call for on Drawing 14-2-05.

Please note my last name is "Nolen".

I will appreciate your equally prompt response.

Bobby Nolen
Nolen Engineering Group LLC

P. O. Box 382813
Birmingham, Alabama 35238

ph: 205-529-3390

From: Micah Gravitt [<mailto:Micah.Gravitt@tn.gov>]
Sent: Friday, November 14, 2014 1:02 PM
To: Bobby Nolen
Cc: Jennifer Innes
Subject: RE: Tracy City - Project No. 14, Section 2: Status of Review

Mr. Nolan,

I have reviewed your re-submittal and have a few other things. First, you left out this statement from the narrative (It will apply to the slopes of the sludge basin):

- Steep slopes (greater than or equal to 35%) shall be stabilized no later than 7 days after construction activity on these slopes has temporarily or permanently ceased.

See the attachment for the other requested changes. Let me know if you have any questions. Thanks.

Micah Gravitt
Environmental Program Coordinator
Chattanooga Field Office
(423) 634-2547

From: Bobby Nolen [<mailto:reepicheep@charter.net>]
Sent: Friday, November 14, 2014 11:05 AM
To: Micah Gravitt
Cc: Jennifer Innes
Subject: Tracy City - Project No. 14, Section 2: Status of Review

Good Morning, Mr. Gravitt,

Please inform me of TDEC's schedule to complete review of the revised NOI and SWPPP submittal. Thanks.

I respectfully request that, if it appears TDEC may reject the buffer intrusion request, conditional approval would be given to the remainder of the application. We will evaluate options for the sludge basin once construction begins and submit any amendments to the SWPPP that may be required. Meanwhile, if the SWPPP treatments for the other areas may be approved, it would be most helpful to allow work to begin promptly.

Thanks for your help and your response.

Bobby Nolen
Nolen Engineering Group LLC

P. O. Box 382813
Birmingham, Alabama 35238
ph: 205-529-3390

Erosion Control Blanket - Slope Installation

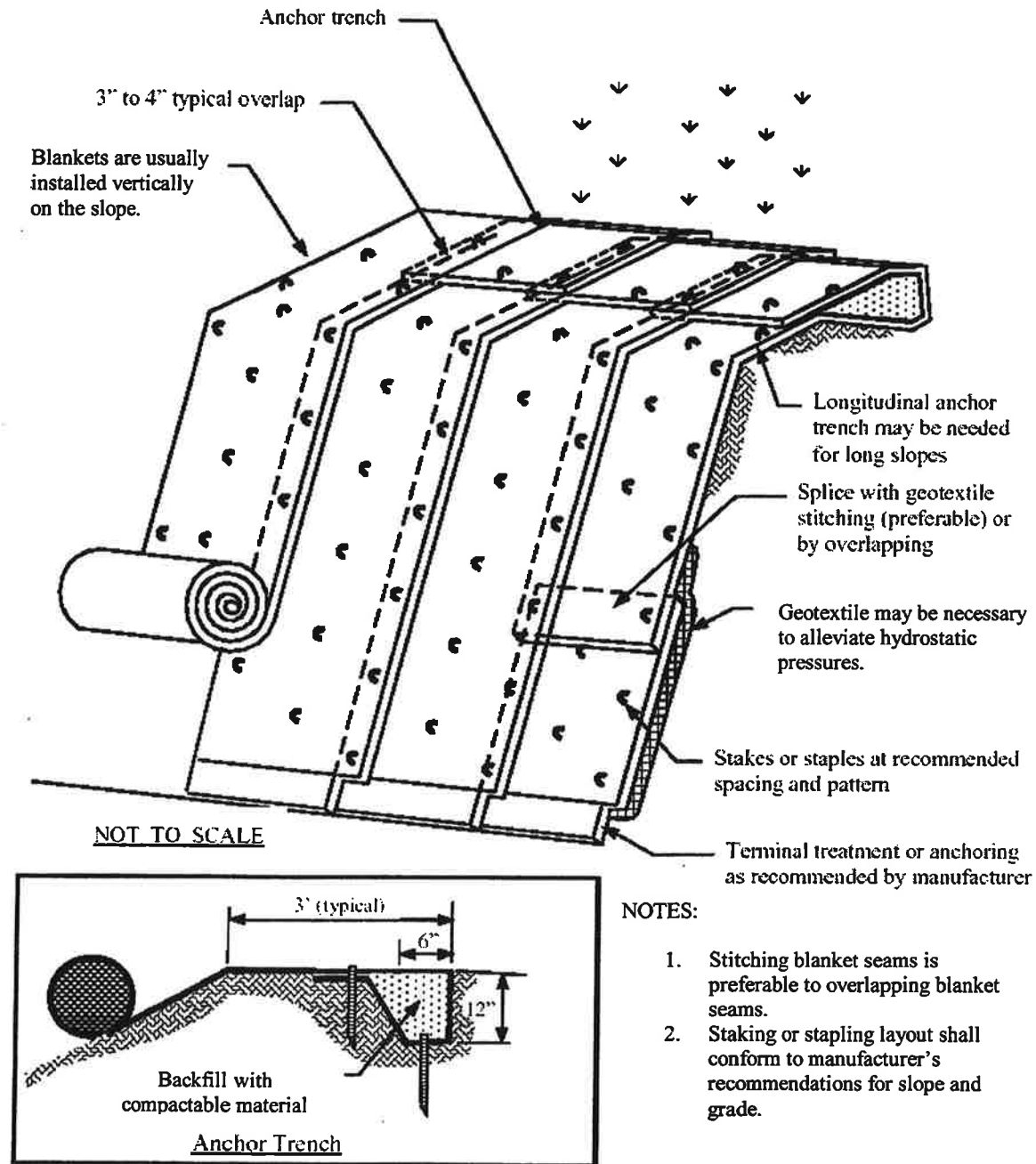


Figure 1

Source: Knoxville Engineering Department

Erosion Control Matting - Channel Installation

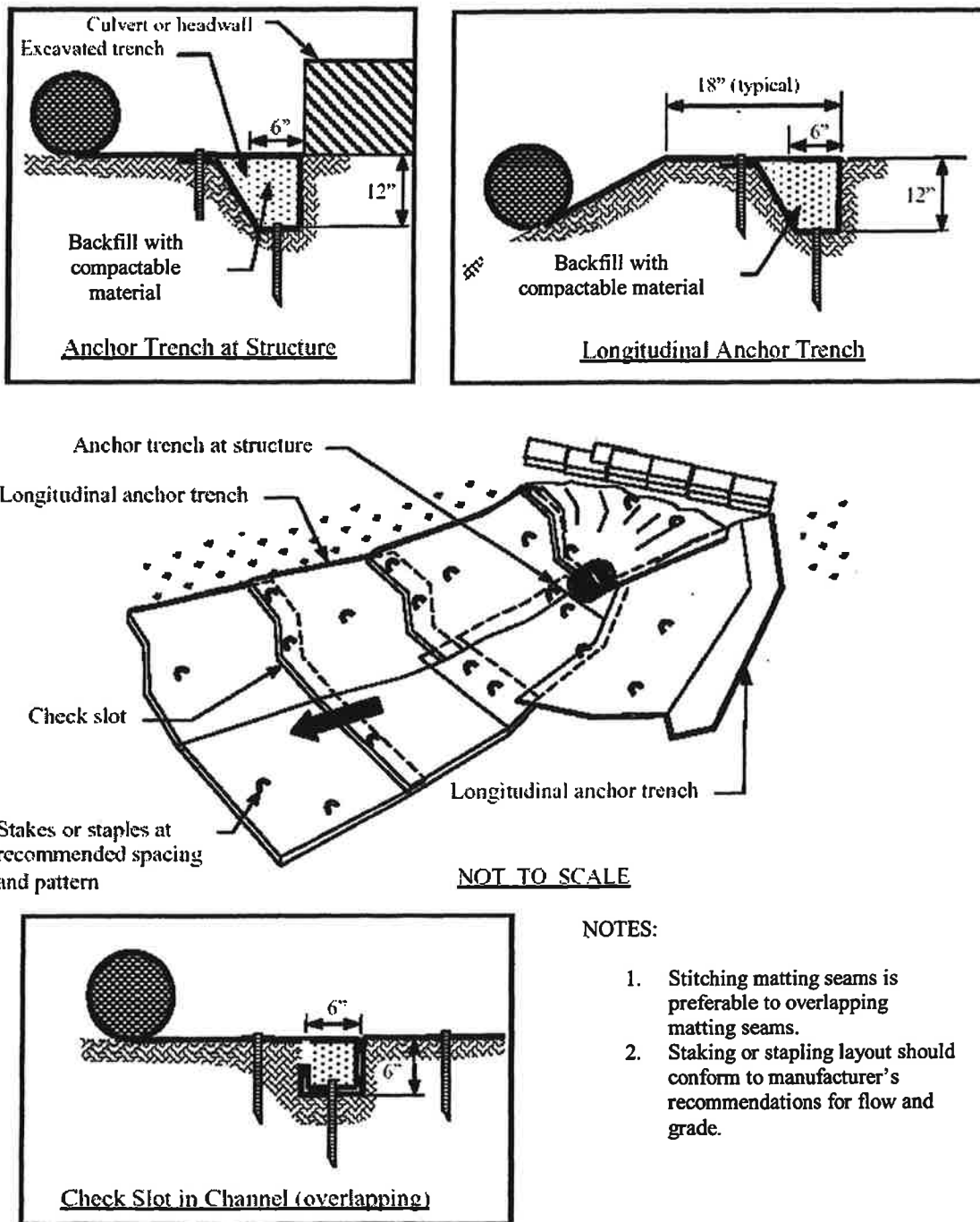


Figure 3

Source: Knoxville Engineering Department

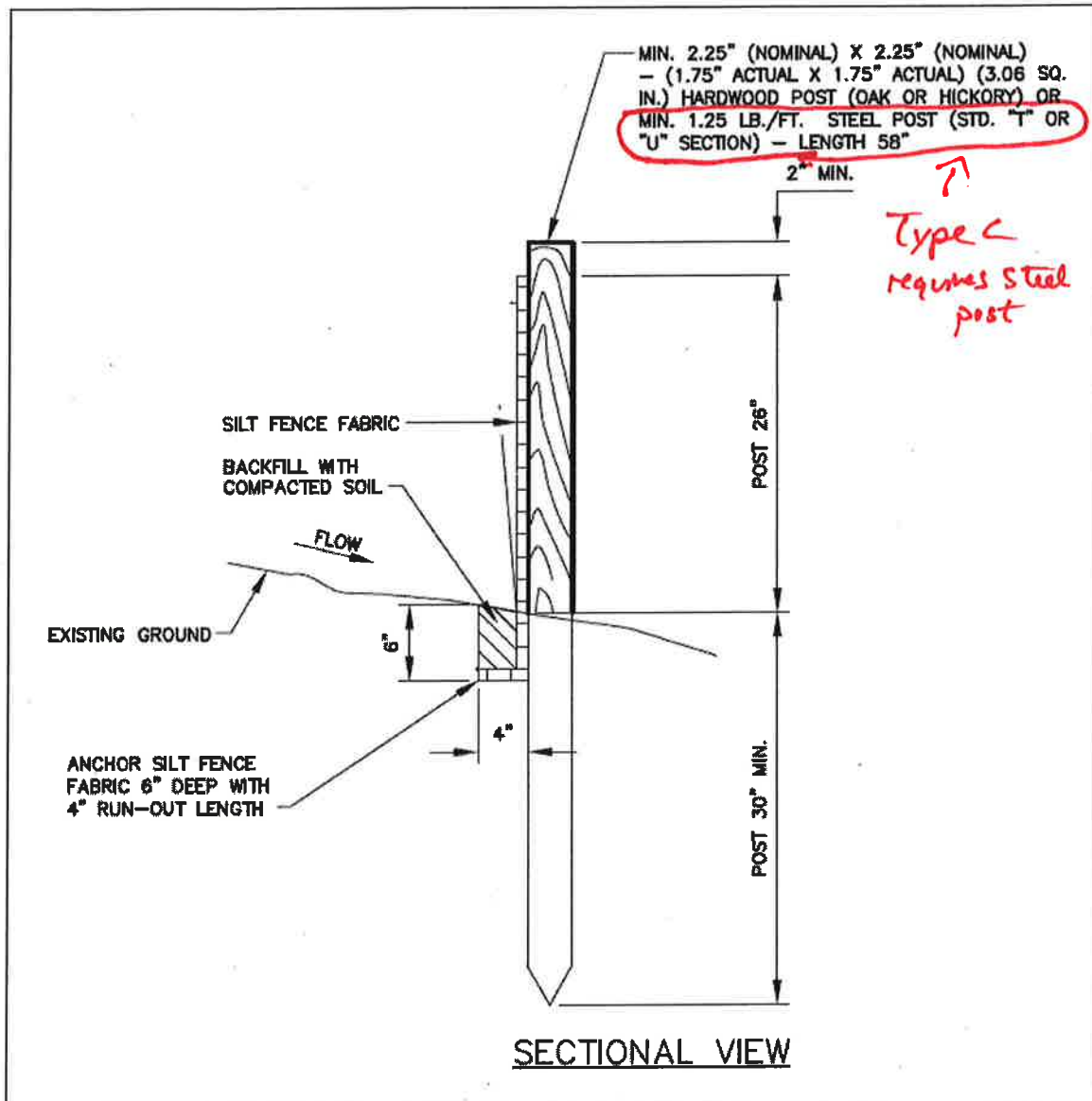
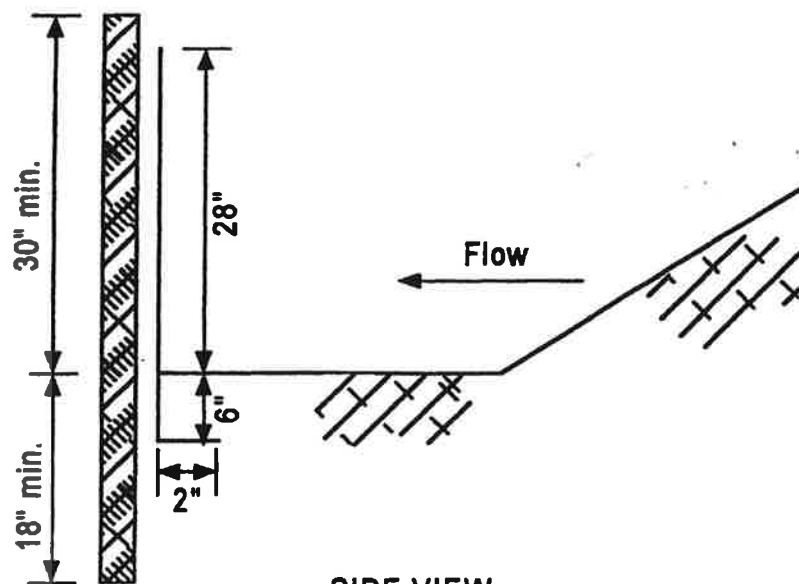
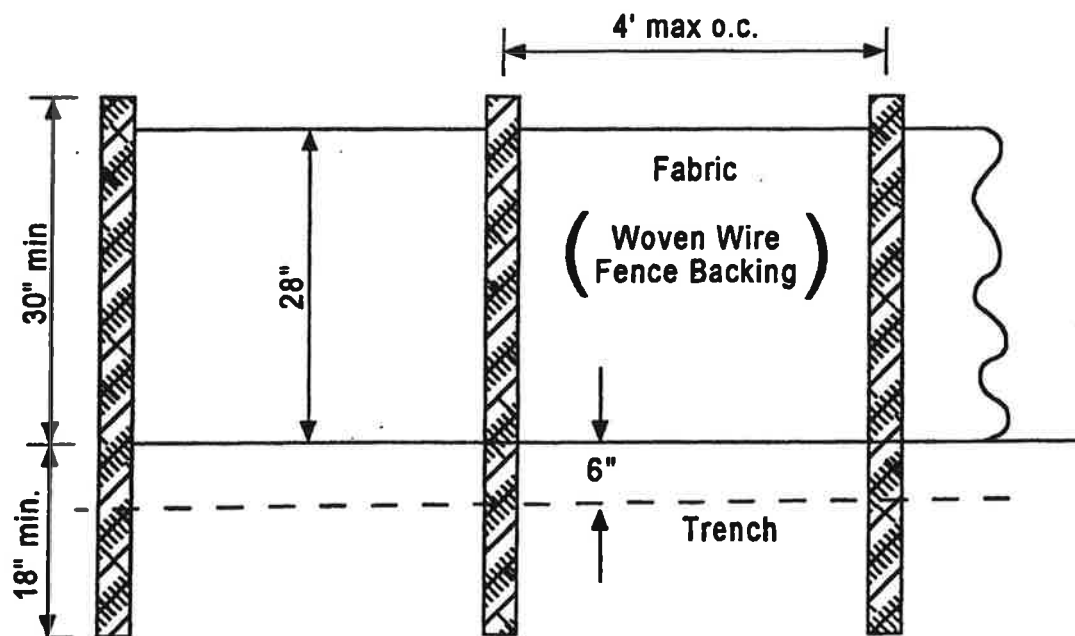


Figure 7.34-2 Silt fence details

Silt Fence – Type C



SIDE VIEW



FRONT VIEW

Figure 3

Source: GA SWCC

Irrigation: During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will ensure germination of the seed. Subsequent applications should be made as needed. Newly seeded areas require more water than more mature plants.

Species	Rate (lb/acre)
Rye	120
Seeding dates	
East	Above 2500 feet: Feb. 15 - May 15
	Below 2500 feet: Feb. 1 - May 1
Middle	Jan. 1 - May 1
West	Dec. 1 - Apr. 15
Soil amendments	
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.	
Mulch	
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.	
Maintenance	
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.	

Figure 7.8-1 Temporary Seeding Recommendation for Late Winter and Early Spring

Species	Rate (lb/acre)
Oats	60
Brown top millet	30
Seeding dates	
East	May 15 - Aug. 15
Middle	May 1 - Aug. 15
West	Apr. 15 - Aug. 15
Soil amendments	
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.	
Mulch	
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.	
Maintenance	
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.	

Figure 7.8-2 Temporary Seeding Recommendation for Summer

Species	Rate (lb/acre)
Oats	30
Winter wheat	30
Seeding dates	
East	Aug 15 – Dec 15
Middle	Aug. 15 – Dec 30
West	Aug. 15 – Dec 30
Soil amendments	
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.	
Mulch	
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.	
Maintenance	
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage. If necessary to extend temporary cover beyond June 15, overseed with 50 lb/ac crimson clover in late February or early March.	

Figure 7.8-3 Temporary Seeding Recommendations for Fall

Maintenance and Inspection Points

Reseed and mulch areas where seedling emergence is poor or where erosion occurs, as soon as possible. Do not mow.

References

North Carolina Erosion and Sediment Control Planning and Design Manual

Table 7.9-1 Preferred seed mixes using natives or naturalized plants and planting dates.

*non-native but do not spread.

Zone		Best	Marginal	Preferred Rate/Mix (lb/ac PLS)
Region I	Poorly drained soils	Feb 1 – Mar 20 Sept 1 – Sept 30	Mar 20 – Apr 30 Sept 30 – Oct 31	15 Browntop millet* (nurse crop) 2 switch grass 4 little bluestem 4 Virginia wild rye 4 purpletop 2 partridge pea 2 black-eyed susan
	Well drained soils	Apr 1 – July 15		15 Browntop millet* (nurse crop) 4 little blue stem 4 purpletop 2 sideoats gramma 2 partridge pea 2 black-eyed susan
	High maintenance	Apr 1 – July 15		15 Browntop millet* (nurse crop) 2 partridge pea 45 Red fescue* 45 hard fescue* 25 chewing fescue*
Region II	Low maintenance; Slopes and Poor, shallow soils	Aug 25 – Sept 15 Feb 15 – May 30	Sept 15 – Oct 25 Mar 21 – May 30	15 Browntop millet* (nurse crop) 5 little bluestem 2 switch grass 2 tall dropseed 5 sideoats gramma 2 black-eyed susan 2 partridge pea 1 greyheaded coneflower
	Low maintenance; Moderate slopes; soils >6 in. depth	Aug 25 – Sept 15 Feb 15 – May 30	Sept 15 – Oct 25 Mar 21 – Apr 15	15 Browntop millet* (nurse crop) 5 purpletop 5 little bluestem 5 Virginia wild rye 2 black-eyed susan 2 partridge pea 1 greyheaded coneflower
	High maintenance	Aug 30 – Oct 15	Feb 15 – Apr 15	15 Browntop millet* (nurse crop) 2 partridge pea 45 Red fescue* 45 hard fescue* 25 chewing fescue*
Region III	>2500 ft elevation; steep slopes	Mar 20 – Apr 30	Aug 15 – Aug 30 Mar 1 – Mar 20 Apr 20 – June 15	15 Browntop millet* (nurse crop) 5 purpletop 10 little bluestem 10 Indian grass
	<2500 ft elevation; steep slopes	Aug 15 – Sept 1 Mar 1 – Apr 1	Sept 1 – Sept 15 Apr 1 – June 10	2 black-eyed susan 0.5 monarda (bergamot) 4 Maryland senna

Region III <i>cont'd</i>	>2500 ft elev.; Shallow soils	Mar 20 – Apr 20	Aug 15 – Aug 30 Mar 5 – Mar 20 April 20 – June 15	15 Browntop millet* (nurse crop) 4 purpletop 10 little bluestem 10 broomsedge 2 partridge pea 2 black-eyed susan 0.5 monarda (bergamot)
	<2500 ft elev.; Shallow soils	Aug 15 – Sept 1 Mar 1 – Apr 1	Sept 1 – Sept 15 Apr 1 – June 10	15 Browntop millet* (nurse crop) 4 purpletop 10 little bluestem 10 Indian grass 2 black-eyed susan 0.5 monarda (bergamot) 4 Maryland senna
	>2500 ft. elev.; Moderate slopes	Mar 20 – Apr 20	Aug 15 – Aug 30 Mar 5 – Mar 20 Apr 20 – June 15	15 Browntop millet* (nurse crop) 4 purpletop 10 little bluestem 10 Indian grass 2 black-eyed susan 0.5 monarda (bergamot) 4 Maryland senna
	<2500 ft. elev.; Moderate slopes	Aug 15 – Sept 1 Mar 1 – Apr 1	Sept 1 – Sept 15 Apr 1 – June 10	15 Browntop millet* (nurse crop) 45 Red fescue* 45 hard fescue* 25 chewing fescue*
	>2500 ft elev.; High maintenance	Mar 20 – Apr 20	Aug 15 – Aug 30 Mar 5 – Mar 20 Apr 20 – June 15	15 Browntop millet* (nurse crop) 45 Red fescue* 45 hard fescue* 25 chewing fescue*
	<2500 ft elev.; High maintenance	Aug 15 – Sept 1 Mar 1 – Apr 1	Sept 1 – Sept 15 Apr 1 – June 10	15 Browntop millet* (nurse crop) 45 Red fescue* 45 hard fescue* 25 chewing fescue*

In Table 7.9-1, the bold dates are the preferred dates for seeding. Also, high maintenance areas include lawns and other grassed areas that will be maintained for aesthetics.

Table 7.9-2 Allowable seed mixes and planting dates.

Zone		Best	Marginal	Rate/Mix (lb/ac PLS)
Region I	Poorly drained soils	Feb 1 – Mar 20 Sept 1 – Sept 30	Mar 20 – Apr 30 Sept 30 – Oct 31	80 Pensacola bahiagrass 30 Bermudagrass (hulled) 20 Korean lespedeza** 10 Kobe lespedeza**
	Well drained soils	Apr 1 – July 15		50 Pensacola bahiagrass 15 Bermudagrass (hulled) 30 Korean lespedeza** 15 Foxtail millet**
	High maintenance	Apr 1 – July 15		40 Bermudagrass (hulled)
Region II	Low maintenance; Slopes and Poor, shallow soils	Aug 25 – Sept 15 Feb 15 – Mar 21	Sept 15 – Oct 25 Mar 21 – Apr 15	100 Pensacola bahiagrass 40 Bermudagrass (hulled) 20 Korean lespedeza** 10 Kobe lespedeza**
	Low maintenance; Moderate slopes; soils >6 in. depth	Aug 25 – Sept 15 Feb 15 – Mar 21	Sept 15 – Oct 25 Mar 21 – Apr 15	80 Pensacola bahiagrass 30 Bermudagrass (hulled) 20 Korean lespedeza** 10 Kobe lespedeza**
	High maintenance	Aug 15 – Oct 15	Feb 15 – Apr 15	200 KY 31 fescue**

Region III	>2500 ft elevation; steep slopes	July 25 - Aug 15 Mar 20 - Apr 20	July 15 - July 25 Aug 15 - Aug 30 Mar 1 - Mar 20 Apr 20 - May 15	100 KY 31 fescue** 20 Kobe lespedeza** 10 Korean lespedeza** 5 Redtop
	<2500 ft elevation; steep slopes	Aug 15 - Sept 1 Mar 1 - Apr 1	July 25 - Aug 15 Sept 1 - Sept 15 Apr 1 - May 10	
	>2500 ft elev.; Shallow soils	July 25 - Aug 15 Mar 20 - Apr 20	July 15 - July 25 Aug 15 - Aug 30 Mar 5 - Mar 20 Apr 20 - May 15	40 KY 31 Fescue** 10 Korean lespedeza** 10 Redtop 10 Crown vetch**
	<2500 ft elev.; Shallow soils	Aug 15 - Sept 1 Mar 1 - Apr 1	July 25 - Aug 15 Sept 1 - Sept 15 Apr 1 - May 10	
	>2500 ft. elev.; Moderate slopes	July 25 - Aug 15 Mar 20 - Apr 20	July 15 - July 25 Aug 15 - Aug 30 Mar 5 - Mar 20 Apr 20 - May 15	60 KY 31 fescue** 15 Korean lespedeza** 15 Kobe lespedeza**
	<2500 ft. elev.; Moderate slopes	Aug 15 - Sept 1 Mar 1 - Apr 1	July 25 - Aug 15 Sept 1 - Sept 15 Apr 1 - May 10	
	>2500 ft elev.; High maintenance	July 25 - Aug 15 Mar 20 - Apr 20	July 15 - July 25 Aug 15 - Aug 30 Mar 5 - Mar 20 Apr 20 - May 15	200 KY 31 fescue**
	<2500 ft elev.; High maintenance	Aug 15 - Sept 1 Mar 1 - Apr 1	July 25 - Aug 15 Sept 1 - Sept 15 Apr 1 - May 10	



Figure 7.9-2 Typical Seed

Roundstone Native Seed, LLC
9764 Raider Hollow Road, Upton, KY 42784

Kind: Switchgrass		Lot No: 11074	
Variety:	Cave-in-Rock	Inert Matter:	1.78
Origin:	KY	Weed Seeds:	0.00
Test Date:	02/12	Crop Seeds:	0.00
Pure Seed:	98.22	Hard Seed:	0.00
Total Germ:	95.32	Germ:	95.32
Pure Live Seed:	93.62	Noxious:	0.00

Seeding rates: Seed rates in Table 7.9-1 are based upon Pure Live Seed (PLS), which is the product of the purity shown on the seed tag multiplied by the germination. The PLS for the seed tag shown in Figure 7.9-2 would be $0.9362 \times 0.95 = 0.89$. Thus only 89% of the seed are considered live. If the plan calls for a seed rate of 2 lb/acre of switchgrass find the actual seed rate for the conditions shown on the tag. Actual seed rate required is $2 \text{ lb/ac} / 0.95 \text{ PLS} = 2.15 \text{ lb/acre}$. In other words, to get an actual rate of 2 lb. per acre it will require 2.15 lb. of seed.

Temporary seed may be required when seeding outside of the preferred seeding dates. See Section 7.8 for more information on temporary seeding.